/477 cont./

411 Our Yamana use spears as lighter thrusting weapons. We can distinguish between a spear used for birds and one for fish. The shaft of the former is likewise a pole that is uniformly cut and prepared, but this is usually a young trunk of Maytenus magellanica or of Nothofagus or Drimys winteri, from which the bark has been peeled off. It is usually not more than three meters long. The thick end is cut off straight across. Here the notch is cut from one side without letting it come through to the other side. About a quarter of the diameter remains, and this serves to support the bone point which is inserted here with the back against the remaining portion of the wood. The lower part of the point has several short upright teeth. A narrow strap is tightly wound around it in the spaces between the teeth. The same shaft with the partial notch just described is also used for the ʃuʃuwaja, securely and firmly held in it.

411 /478/ The serrated points made of bone or wood are characteristic for these spears. For the bone teeth, whale ribs are used ex-
324 clusively. They are first treated with coarse sandstone, then with quartz splinters or mussel shells, and finally burnished with pumice. The two edges end in a point at the top, the back is rounded off (183).

183. It cannot be definitely determined whether the Yamana made a bone point with both edges serrated. However, BD:64 mentions: "'auaia, 'the single or double notched spear head used for seals, porpoises" /cited in English/. Among the Halakwulup I found the double-rowed, serrated spearhead of wood, as well as of bone, and sometimes even the two together.

[171]

and on the opposite side the natives laboriously cut or saw out one little tooth after another with sharp mussel shells or quartz splinters. These small teeth are narrow and more or less irregular; they are close together and point obliquely downward. The little piece at the lower end is irregularly serrated and tapers; it is set into the notch and lashed.

411 This spear with the bone point is used for hunting birds. It is
223 most often hurled against penguins which have tough flesh into which a wooden point would not penetrate deeply enough.

/483 cont./

411 both attached on the same side, namely, the side without hair. Each string ends in a small knot, having first been sewed on with sinews. The strings are tightly braided with three strands of sinew. On a specimen in my collection one string is 66 centimeters, the other, 62 centimeters. Each string terminates in a small knot which is sewn into a ball the size of a hazelnut, made of otter leather. The sling brought back by J. Cook and now in the ethnographic collection at Göttingen has a total length of 167 centimeters. This is the measurement of the so-called long sling. There is also a shorter one which is used by a man in a canoe. Here he would not have firm footing and the space is too small to swing the long sling with force and without injuring the occupants.

411 223 Earlier observers left no doubt as to the use of the sling. Actually, it is used a great deal, especially in hunting birds. Colini:161 does not exaggerate when he says that "the weapon most used by the Fuegians is the sling". /translated from Italian/. Martial:191 confirms: "They more commonly use the sling for birds" /translated from French/. They hurl stones which are somewhat smaller than a hen's egg and that lie around in masses. They lay in a supply for the canoe each time before they leave.

Some men prefer to use two or three stones at once, especially if they venture a throw at a thick flock of birds standing close together. Other men are in the habit of using only one larger stone. The man places the terminal knot of the longer string into the palm of his hand between the fourth and fifth fingers, so that the string runs tight across the back of his little finger up to the leather piece; he grasps the terminal knot of the shorter string with the first /484/ joint of thumb and index finger. Then the fingers of his left hand grasp the center section with the stone, and his right hand, with a slight push, begins to turn the taut sling horizontally above his head two or three times. At the right moment the shorter string is released, the sling opens, and the stones fly out straight in front of the slinger. The more forceful the previous turning motion was, the stronger will be the impact of the stones. Some men are content with a single half-turn of the taut sling.

If the stones are to have the desired effect, they are not hurled beyond a 12-meter limit, and everyone aims at the heads

/484 cont./

223 411 of the crowded flock of birds; this may hit one or another of them and stun them. Even the Fuegian cannot hit a definite target at the same distance or farther away, since the sling is not very accurate, but it does carry a stone in a high arc to a distance of 80 meters (192). Nevertheless, we must admit, to

192. On this subject Bove (x):150 and Colini:161, as well as Lovisato (x):198 and (y):136, have grossly exaggerated. Hyades (k):32 and (q):207 protested against their assertions which literally coincide.

[526] use Hyades' (g):26 words, that the Tamans "are very skillful in manipulating them," and in the course of the day they very often use the sling just for fun (193).

193. This can hardly be more clearly expressed than Bridges has done: "The amusement these natives are most fond of is slinging at birds; they often go along the shore here with their slings" (VIA XII, 3):1965) /cited in English/.

411 48 Naturally, our Indians must have their slings handy. Their way of carrying them is surprisingly advantageous. Most of them hang the two strings of sinew around the neck and draw the last third of it over the folded center section, without any kind of knotting; the ends hang down freely. With a single movement of the left hand to grasp the center section, the sling is ready to be used. At the same moment the right hand puts the stones in position and grasps the ends, ready to throw (Fig. 41). Others draw the two sinew-strings around the head, one on each side, so that the center section is in the back, and then simply loop the free ends over each other. Finally, a few of them tie the sling around their hips (194). As we have said, they put the sling

194. Fitz-Roy (x):138 noticed that "a man always carries his sling around his neck or waist, wherever he goes" /cited in English/.

/424 cont./
around some part of their body to have it quickly accessible at any time, but it is not regarded as an ornament (185). The

185. Hyades (b) 33 expressed the surprising view: "We must therefore admit that the sling of the Yahgan is as much an ornamental object for men as it is a weapon for hunting or war" /translated from French/.

Fig. 41. Man with a sling.

Yamana use it not only to stun birds, but also in fighting against their own people.

/425/ All indications point to the fact that the sling was used in all parts of the Cape Horn Archipelago. /Fig. 41 appears here./ Every man and boy owned and owns one. When the Mission Scientifique arrived in Orange Bay, according to Hyades (b) 307, every man carried his sling. This was commonly throughout the entire area occupied by this tribe. Ludwig (b) 137 indulges in vain speculation about the origin of the sling and says "that the Ona had acquired knowledge of this weapon from the Yaghan" /stated in English/. I cannot agree with this view. I shall not go into his evidence and mine at this point. Instead, I take the view of Snow (b) 264 that the Yamana "are remarkably expert with their slings" /stated in English/. Obviously, the fact that they own and use the sling also proves "their ingenuity" /stated in English/.

8. Snares and Fishing Implements

Our Yamana are fortunate in having a wide selection among the animals of their homeland to meet their food needs. They approach each species in a special way in order to catch them as easily and surely as possible. Besides the weapons mentioned

/SIL cont./

223 224 above, they also use several implements which we shall briefly characterize here and describe in greater detail below. These implements have been brought under one heading in this section. They help the men and women to obtain the smaller representatives of Fuegian fauna, namely, birds and the so-called lower animals, such as mussels and rabbs.

C. The Snare-line

223 This is a construction that is used for incomparably more objects. The Yamana call it *uña*. I believe the most suitable designation is large snare-line. It could also be called "snare-trap." It is used more often by the fishermen than by our Fuegians. Hyades (Q:359 correctly reminds us that it was observed by Bougainville in the year 1768 on the shores of the Strait of Magellan.

223 225 The foundation, so to speak, of this large snare-line is a thick, braided cord of long guanaco sinews. Since few /SIL/ people can obtain this, they content themselves with whale sinews and make a first braid with three strong strands. This is saturated with fat and repeatedly greased, for it often lies on the damp earth for a long time and must be protected from rotting.

223 224 On the long cord at intervals of about 60 centimeters, there are tied as many knotted loops, known as *kaʃpi*, as the length of rope will permit. Each of them consists of a single strip of whalebone about four millimeters wide, the edges of which must not be sharp since this would interfere with the free movement of the small loop-knot at the upper end. The other end, after being drawn through the loop, terminates in a simple knot and is fastened to the long cord. All the knotted loops are placed on the same side of the cord. Each one, when it is entirely loose, has a diameter of nearly 30 centimeters.

223 Actually, therefore, the large snare-line *uña*, is, following Hyades (Q:304, a "game of snares" /translated from French/ (Fig. 59). Martial 136 calls it "a snare" /translated from French, *lacet*/, which he describes as "a rope of oval meshes on which

/486 cont./

223 running loops of whalebone are placed at intervals" /translated from French/ (196).

196. There is a good illustration in Hyades (q):Plate XXX. Lothrop (b):157 calls attention to the large snare-line of the Selk'nam; he overlooks the fact that this differs in the arrangement of the whalebone running-loops of our Yamana.

It is best suited to catch wild geese, which prefer a certain locality. Here this snare-line is spread out on the level ground, pulled taut, and finally tied at either end to a post driven into the ground. It is of little or no use for catching other birds. Hyades (q):304 expresses himself too vaguely when he says, "this snare is used to catch large birds" /translated from French/. That is also the reason why only a few Yamana families actually own and use this article, since it is laborious to make and must be very carefully stored. Thus it represents a considerable value.

β. The Snare-rod

Whereas the long snare-line serves to catch masses of birds, another implement which I call the snare-rod catches them singly. With this the Indian stalks chiefly geese and ducks, but also cormorants and penguins. Hence one sees this akāmuš, as the implement is called, in almost every family.

It consists of two parts. A light, long rod as a shaft, known as yēyakēr^{i}, with a rounded, smooth surface is nothing more than [824] a young trunk of Nothofagus betuloides or Maytenus magellanica, which has been treated by a long process of scraping. It must be very light, hence Drimys is not suitable. The average diameter is evenly scaled down /487/ to 15 millimeters. This shaft tapers a very little at either end and very gradually. The longer it is, the more suitable.

223 284 At the top a large noose of whalebone is attached, and thus the whole thing appears, as Hyades (q):359 expresses it, like "a

/487 cont./

223 284 long, slender shaft furnished with a running loop of whalebone" /translated from French/. The end piece is attached to the tip of the shaft by a knot in the lashing of sinew. It is surprising that this whalebone noose, kēʳᵘ ĕf, is put together with two pieces, a long one and a short one. The two run side by side for a few centimeters and are lashed with sinews; the short one ends in a small loop-knot. We also find this same overlapping [171] in every one of the whalebone loops on the long snare-line of the Selk'nam (Vol. I, 283), whereas on that of our Yamana each whalebone loop is one strip only (Fig. 59). A kēʳᵘ ĕf consisting of two parts is more effective and more durable; our Yamana are convinced of that. But why they do not use these two-part loops on the long snare-line no one could tell me. Probably the people avoid the greater effort, since the work of making a snare-line is laborious enough.

223 We need not explain specifically how this snare-rod is used. It is, of course, put forward unnoticed by a man hidden in a suitable spot, drawn over the head of a bird, and immediately pulled in with a sharp jerk. The principle of the noose is exactly the same as in the case of the long snare-line. The natives even use a single whalebone noose without any kind of shaft to catch birds. Herewith we have adequately described and characterized the threefold way in which the whalebone snare is used by the Yamana.

γ. Mussel Fork, Mussel Breaker, Crab Fork

226 [562] The shellfish of the sea have the same importance for the diet of our Fuegian as bread, for instance, has for the European. Many of them he can gather on the beach, others he must take out of the water. The two types of mussels which are found there, namely ēʳᵘ uf (Mytilus chilensis) and kecoin (Mytilus edulis), occur in vast quantities. They are larger and tastier the more abundantly they are covered with water even at lowest ebb tide and the stronger the current is that swirls around them back and forth. It would be impossible to pry these animals loose with one's hand, as one can, for instance, the smaller and less tasty ones that every ebb tide uncovers.

/521 cont./

225 whale, be it large or small, will provide for many families, often entirely free.

3. Bird Hunting

223 825 The home of the Yamana swarms with land birds and sea birds. A gaily colored, feathered throng of many shapes animates the islands and rocks, inhabits the inlets and lagoons, and crosses the network of channels and the broad open spaces in flocks, in stormy and sunny weather. Their habits and characteristics are all well known to the Indian, but he pays them special heed only insofar as they have something to offer him or to tell him. Some of them furnish him with tasty meat and others with fresh eggs in spring; some yield him coveted feathers for body decoration, others their bones for necklaces; certain ones announce a change of weather or of seasons, and a few are heralds of interesting events in the distance, even in the future. All of them live in his belief [773] as the descendants of that stratum of population which inhabited this region long before the actual human beings of today.

As is to be expected, however, those species mean most to him which serve him as food. Not just any animal that comes within the Indian's range tempts his palate and his appetite. He has good judgment in distinguishing among them, and he consciously chooses what is good for him. He avails himself of only a few species for his own use from the plentiful feathered world of his homeland. What does not serve him and does not suit his wishes, he lightheartedly passes by. Everywhere he is selective and wisely calculating, not least in evaluating the types of birds available to him.

223 From the start he pays no attention to small animals; the meat they could give him would not be worth his efforts. Herons and owls mean nothing to him either, for they are all skin and bones. Sea birds and the easily available gull chasers, especially the diurnal predatory birds, such as condor and falcon, vulture and hawk, repulse him because they feed on carrion. There are other birds, however, that he would not want to be without in his selection of food; they are a welcome change in the dull taste of his monotonous meat diet. Primarily he has his eye on penguins and

/521 cont./

223 cormorants, on wild geese and /522/ ducks, and finally on oyster catchers and divers. He does not mind the predominant blubber taste of their meat; he feels a compulsive need for a good deal of fat in that cold region where he must sustain himself with insufficient body covering and poor living conditions.

We recognize his sharp gift of observation from the way in which he hunts birds. Their habits form the basis of his methods of hunting and snaring them. These methods again point to his mental gifts, since the suitability of his implements can hardly be surpassed (244). Environment educates primitive man far more

244. This does not become evident if one dis-

Fig. 56. Use of the Sling.

misses the various methods of hunting and trapping with a few words, as do Outes (g):53, for example, or Martial: 195. Bridges (k):240, on the other hand, emphasizes the skill of the Yamana in their bird hunting: "They have various methods of hunting and killing birds, and in all they show much skill" /translated from Spanish/.

than civilized man, who, to begin with, is much more comfortably situated. /Fig. 56 appears here./ Concern with necessary subsistence makes primitive man a keen judge of his territory and an unsurpassed inventor in the realm of his activities. This is true in

/522 cont./

223 the highest degree of a people who, like our Fuegians, are in the so-called economic gathering stage. They are and remain wholly dependent on what nature voluntarily offers them in their homeland. Hence, if they wish to preserve life -- and this their strongest instinct compels them to do -- they must, with rigorous deliberation and repeated practical attempts, take what serves them and what leads safely to their goal with a minimum of effort.

In spite of the abundance of birds, the Yamana, as we have said, prefer certain kinds, above all penguins and cormorants, wild ducks, and sea geese. Even among these they make a selection and get a little variety into their meal. They also aim for the giant sea birds (Diomedea, Querquedula, Phoebetria, Puffinus, Thalassoea), for gulls (Larus), terns (Sterna), and swans (Cygnus melanocoryphus), and now and then land birds, such as herons (Nycticorax), snipes (Gallinago), spectacled ibis (Theristicus), plovers (Charadrius), sandpipers (Totanus), coots (Fulica), and oyster catchers (Haematopus); finally, the small songbirds, /523/ such as thrushes (Turdus, Curaeus), passerines (Cinclodes), and parrots (Microsittace) (245). They kill some with stones hurled

245. Hyades (f):562 has made an almost complete list of the birds hunted by the Yamana. It clearly shows the great variety.

with their bare hands or with a sling (Fig. 56), others with bow and arrow or with the so-called bird spear (Fig. 57), and still others with snares and traps, all depending on whether the method promises success. The more important species of birds are hunted according to definite methods that bear favorable testimony to the skill, cunning, and energy of the hunter.

a. Penguins

It is not surprising that the Yamana most often hunt penguins. They inhabit the rocks and inlets there in large groups. Fitz-Roy (a):184 noted that "penguins are much prized" /cited in English/.

/523 cont./

223 Most easily accessible because they are most often found in the channels are the spectacled penguin, súrsa, sússa (Spheniscus magellanicus), and the rock penguin, kelóina (Spheniscus humboldti), which are smaller in number and in body size than the two related species, the golden-haired penguin, kálawina (Catarrhactes chrysocome), and the golden-crowned penguin, kérnux (Catarrhactes chrysolophus). The considerably larger king penguin (Aptenodytes patagonica) prefers the southern waters and very seldom is found in the country inhabited by the Yamana.

During the day most of the birds of the two species first mentioned remain on the outlying islands and rocks. On calm days, which are rare, the family rows there in their canoe. The man disembarks and easily approaches the clumsy animals which he strikes down with a cudgel. He can comfortably kill a good dozen in a few minutes; he tosses them into his vessel and leaves the place.

Ordinarily he can only kill the individual animals that he runs across now and then on his trips. Penguins like to form small groups and are not timid. With some cleverness the hunter can approach them. The woman rows the canoe in the direction of the birds while the man keeps the sling, as well as the bird spear, in readiness; he must decide on one or the other in a moment of time. He does not promise himself much with the sling, for only a very lucky hit with the stone will stun the powerful penguin. Hence he tries to get very close. He prefers to hurl the bird spear. It does not matter whether this has one or two bone points (Fig. 57), the animal is almost always fatally wounded because the heavy, coarse weapon tears open a large wound and it soon bleeds to death. It cannot sink, in part because of the wooden spear shaft. It is easily lifted into the canoe.

Thus an individual family will steer toward those spots where these birds frolic about and will try their luck in the above manner. /524/ /Fig. 57 appears here./ Sometimes two or several vessels will encircle a small flock of penguins, the men hurling their spears from a greater distance or swinging their slings with heavy stones. It is easy to lay hands on a wounded or stunned bird on the water as well as on land. Since the penguin swims a certain distance only slightly below the surface and can be attracted with

/524 cont./

223 a soft whistle, the hunter instructs his wife how to steer the canoe. He observes the movements of the bird and tries to meet it suddenly as it comes up out of the water two meters or less away. The alert hunter must take advantage of the moment when the penguin, reappearing out of the water, lifts its head above the surface, and then he must thrust the spear in its body. The proximity of the boat, which frightens the unsuspecting animal, would cause it to dive again immediately. Penguin hunting shows how dependent man and wife are upon each other and how their cooperation brings success which will benefit them and their family.

[411]

Fig. 57. Bird Spear. Natural size.

β. Cormorants

No less valuable than the penguins for the hungry Yamana are the cormorants which are almost as plentiful there. These Indians are primarily interested in four kinds, namely, the Vigua cormorant, touwīšiwa (Phalacrocorax olivaceus), the Magellanic cormorant, ē'etex (Phalacrocorax magellanicus), the tufted cormorant, wāsénim (Phalacrocorax gaimardi), and finally the black cormorant, yésex, yésaëx (Phalacrocorax atriceps) (Fig. 58). Other species, such as Phalacrocorax verrucosus, only occasionally visit the inner channels. The meat of this type of bird is tougher and drier than that of the penguins, but the Indian welcomes it nevertheless. He also uses their bones and feathers.

One usually sees the cormorants in small groups on the water and on the beach. The hunter tries to get close enough to them so that he can use his sling successfully if several animals are standing close together. He selects

/524 cont./
two to four medium-sized stones which he hurls forcefully all at once (246). He aims at the heads of the birds, and one hit stuns

246. Hyades (g):35 mentions briefly: "To kill birds they use the sling, in the manipulation of which they are very adroit."

them so completely that he can easily capture them. Whether he is in his boat or on land, he pursues the ones that were not so severely

Fig. 58. Phalacrocorax atriceps.

wounded and try to escape. He kills them with his bird spear or with a cudgel. In the water they are more awkward than penguins.

/525/ As for animals that spend the night on flat land, he creeps up on them in the dark when the weather is calm. They are not sound asleep. If they are awakened, they have the habit of running away, but not taking flight. He carefully conceals a piece of bark, a small section of which is burning faintly, until he is standing in front of the birds. Suddenly he swings the piece of bark or a glowing stick, the end of which is split into thin sections, rapidly back and forth in the air as a kind of torch, sáala, blinding the startled animals. Before they know /Fig. 58 appears here/ what is happening to them, the hunter strikes down several with a cudgel and runs after the ones that are escaping. With this method, in a very short time he has a rich booty and is content.

/525 cont./

223 On a stormy, rainy night the cormorants sleep soundly. They stick their head under a wing and bury it deep in their feathers. The hunter creeping on all fours is certain to get at them without having to exert undue caution. With a sure, firm grip of both hands he grasps the bent neck of the animal, immediately plunges his teeth into the section of the neck left free between his fists, and while he is biting into the neck, his two fists crack it through. The animal dies without a sound. The hunter immediately seizes the next one in the same manner. Nevertheless, sometimes a dying animal will utter a soft sound or struggle convulsively. This wakens the birds standing nearby. The hunter calms them by setting /526/ a dead bird upright with his hands and having it bow gently from one side to the other. Thanks to the darkness of the night and the confusion of the storm, the startled bird is soon quieted and, deceived, puts its head back under its wing. The hunter tries his luck further until he is content with his rich booty (247). He leaves the animals he has killed until the next

247. Twice Bridges (MM:III, 116; 1869 and MM:XIII, 157; 1879) describes in great detail a Yamana attack on cormorants.

morning, and as inconspicuously as he came, he departs. His chief concern is not to startle this flock of birds because they will probably spend the night here again in the near future, and he would prefer to come again not in vain (248).

[231]

248. Furthermore, Fitz-Roy (a):184 maintains: "On moonlight nights, birds are caught when roosting, not only by the men but by their dogs, which are sent out to seize them while asleep upon the rocks or beach; and so well are these dogs trained, that they bring all they catch safely to their masters" /cited in English/.

/526 cont./

223 In this method of catching birds the Yamana show an incredible dexterity in controlling their whole bodies and in deceiving the startled birds. One night I accompanied two men merely to observe them. I crept along behind them. Simply because I had no practice whatsoever, I almost deprived them of success in their hunt.

223 481 The cormorants prefer to nest on the smooth, steep rocks that jut out far into the open sea. From below it is impossible to climb up some of these walls, in which hundreds of the birds make their nests. Sometimes a forced ascent can be made from the other side, and for this the Yamana do not lack daring when their food has become scarce. Several men set out together on a dark, stormy night, after they have oriented themselves somewhat by daylight. They climb up to the top of the rock and get close to the edge of the steep wall within which the many nests have been built. One of the younger men ties a long, firm strap, ükeša, around his loins. He is carefully lowered by the other men who have secured a safe footing up above. Previously they have agreed 223 on certain knocks as signals which the man who is lowered is to communicate to those above by hitting his strap -- this to enable him to move successfully. He seizes the sleeping cormorant, which has hidden its head in its wing, by its bent neck and bites through it. The animal dies at once. Depending on the terrain, he either drops his booty or ties it to the strap around his hips or to a strap that has been lowered. Immediately he seizes another bird. He is favored by the blowing and howling of the dark night, and a good yield is assured him because of the great number of birds, even though some should wake up and escape. If he grows tired or finds himself already heavily laden with booty, he lets himself be hoisted up. Usually another man takes his place in this work, for they want /527/ to take full advantage of this favorable opportunity and be well repaid for their efforts. The people know very well that this undertaking is dangerous (249), but when an emergency

249. This is proved by experiences that Bridges (MM:XIII, 157; 1879) had: "Many accidents occur in following these risky pursuits. Sometimes sharp rocks cut the

223

/527 cont./
thongs, sometimes the man slips, lets go his hold, and falls into the surging sea below" /cited in English/.

presses them, they decide to do it (250) and admonish each other

250. Similar descriptions of this type of cormorant hunting are given by Bridges (in VSA:XII, 214; 1866 and in MM:XIII, 156; 1879), Dabbene (b):186, Hyades (h):39 and (q):359, Outes (g):53, and others.

to be particularly cautious.

In this connection the hunter must count on another difficulty which sometimes puts him in the greatest danger. His wife must row him to those high rock walls or low flat stones on which he plans to hunt the cormorant. He lands during the day and keeps hidden until evening when the birds are expected to come back to their nests. Meanwhile the wife in the canoe has gone back to a safe inlet on another island, but has left her husband some meat and drinking water. Woe unto him if bad weather suddenly sets in, and he is detained longer than expected at this place. "Many days may pass before his wife can venture to cross over the islet to take him off. The solitary man then husbands to the utmost his limited supply of fresh water. The rising billows nearly overflow the islet, sometimes quite so, and threaten to wash him away, and the spray keeps him thoroughly wet. I have [261 heard of very distressing cases, when the men have had to drink 271] shag's blood and to eat them raw, and when they have nearly perished with the cold" /cited in English/. This description by Bridges (MM:XIII, 158;1879), drawn from reality, makes us realize the many dangers and sacrifices that the Yamana encounter on their hunt for cormorants. His accurate knowledge of the region and his sure estimate of the weather, however, stand him in good stead, hence he never recklessly plunges into danger (see Hyades [q]:360).

These birds even spend the night on the stronger trees that grow near the water's edge and are easy to reach. Such trees

/527 cont./

223 soon die because of the abundant guano deposits. When in a short time they are bare of leaves, the cormorants like them even better and roost on their branches in large numbers. The Indian stealthily approaches these, too, cautiously climbs up one of these trees, and kills one sleeping animal after another by biting through its neck and dropping it to the ground. In order to be well covered, he [302] paints his body completely black. This undertaking also demands a masterful dexterity on the part of the hunter. Bridges (MM:XIII, 158; 1879) confirms this: "All are not able to signalize themselves [555] in the difficult art of shag catching, but such as do become valued members of society" /cited in English/, and the rest of the men trust in their leadership.

Finally, cormorants are caught in another, but simple /528/ and not dangerous manner, namely, with bait in a sort of trap known as čewurɛ. This procedure is recommended for level ground and for places that do not have high rocks with breeding holes. The Indians ram a sturdy post into the ground and on it fasten several long, thin sinews, each of which ends in a short, small bone pointed at both ends and with a dead fish drawn over it. The bait is partially covered with a very loose, thin layer of dried algae, and a few pieces of fat are placed on top, which are, first of all, supposed to attract gulls. Along with them cormorants will also gather around this bait and will swallow the anchored dead fish mentioned above. The small pointed bone concealed in the bait settles obliquely in the stomach, and they try to get rid of the discomfort, but the longer they tug and choke, the more surely will they bleed to death (251). The trapper can

> 251. Bridges (h):210 is referring to this bait when he writes: "Or else, for the cormorants, they avail themselves of wooden lures" /translated from Spanish/.

easily get at them.

Hyades (q):359, relying on Bridges, describes a similar bait arrangement: This "consists of three slivers of hard wood, well sharpened, fastened together at the bottom of a curved stick. Their points, facing in opposite directions, are stuck into and

/528 cont./

223 hidden in bait of fish meat. The cormorants are caught by this snare, swallowing, along with the bait, the splinters of wood which penetrate deep into the bird's throat and cause it to die" /translated from French/. Some cormorants are even caught with the so-called noose-rod (Fig. 60). BD:465 speaks of tūkatsĭa, "to catch shags with a noose at the end of a long rod" /cited in English/. The method chosen, of course, depends on local conditions.

γ. Wild Geese

Our Yamana appreciate the meat of wild geese even more than do the neighboring Selk'nam (Vol. I, 282). According to BD:291, Maiū is the "generic term for geese" /cited in English/. The most common are kĭmŋa (Chloëphaga magellanica) and lūrux (Chleŏphaga poliocephala); the strictly monogamous šĕkuš (Chloĕphaga hybrida) is very timid and hard to obtain.

Wild geese congregate in the evening on flat places covered with fresh grass. The Indians use this opportunity to spread out the large snare-line, as I should like to call this trap (Fig. 59) for mass capture. On a strong rope of whale sinews, uswŭmi wăpisa, or a stout leather thong of sealskin, ăma wăra, there are fastened with a simple knot as many running loops of whalebone, kĕx ĕf, as the line of about 20 meters will permit. The loops, about 60 centimeters apart, are a single piece and when open have a diameter of no more than 20 centimeters. Since they consist of a single piece, they are not as safe as those made of two pieces of whalebone of different lengths such as the Selk'nam use (Vol. I, 283, Fig. 63), /529/ hence I regard the latter as more perfect. Moreover, the loops of the Selk'nam snare are placed on either side of the rope, whereas the Yamana put them on one side only (252). They fasten the two ends of the long line /Fig. 59 appears here/ to short posts rammed into the ground. Sometimes a post or two are put in the middle, and the whole line is thus adequately secured. /530/ The individual running loops are open and lie flat on the ground (253). A wild goose walking along,

253. I could not find out whether bait is laid inside the individual loops. Outes

[Text continues on page 240.-Analyst]

223
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Fig. 59. The Large Snare-line. Two-thirds natural size.

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/530 cont./
(g):53 maintains: "Inside they put a bit of fish, mollusks, or meat in order to attract the birds" /translated from Spanish/.

feeding in the grass, gets caught in it and pulls it together more and more the harder it tugs at it. The hunter watches his trap from a distance and counts the birds that already belong to him. He does not come out of hiding until the wild geese that are still walking around freely are frightened away by the anxious unrest of the snared animals. He beats them to death with a cudgel or twists their necks off.

The Yamana has far less opportunity to lay this long snare-line ŭfka, successfully than does the neighboring Selk'nam; local conditions are markedly different in each case. Moreover, if we consider that this article requires considerable trouble to make and is awkward to store, we can understand that a Yamana only rarely owns one. Hyades (h):22 confirms this, saying "that during our year's stay at Orange Bay we saw only five or six specimens" /translated from French/. Other travelers do not even mention it. Hyades (q):359 is correct in his judgment: "The scarcity of these snares leads one to believe that they are no longer very much used for the hunt" /translated from French/. It can be [171] seen at a glance that the snare-lines of the Yamana and Selk'nam are very much alike.

Aside from this, almost every man owns a simple but useful article for catching wild geese and other fowl, such as ducks, cormorants, and penguins. This akămuĭ I should like to call "noose-rod" (Fig. 60). At the top of a thin, strong rod at least two and a half meters long, there is fastened a single running loop, kĕx̌ĕf, made out of a long, narrow strip of whalebone about 60 centimeters in length. In the dusk of evening or on a bright night a man cautiously creeps up to a bird asleep standing upright and places the open noose over its head. He quickly pulls the noose shut and drags the bird toward him, breaking its neck instantly. The more silent he is, the less the animals standing around will be disturbed and the more plentiful will be the nocturnal hunter's booty. The Yamana like to try their luck with

[Text continues on page 242.--Analyst]

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Fig. 60. The Noose-rod.
One-half natural size.

/530 cont./

223 this noose-rod, and they do so often, there being many favorable places for it in their country (254).

254. Hyades (q):359, Lothrop (b):157, and Martial:195 have briefly described this object, without going into greater detail about how it is used.

δ. Steamer Ducks

In the sheltered channels one finds a goodly number of steamer ducks (loggerhead-ducks /English/, steamboat-ducks /English/, canards à vapeur /French/, patovapor /Spanish/. The Yamana call Tachyeres brachypterus by the name ɬlakuĭ. /531/ /Fig. 60 appears here./ The large animals have tasty meat. Since the Indians cannot get at the birds in any other way because of their light slumber, they try their luck with the sling, which, however, is not very promising, for even a powerful hit by a stone does not hurt the strong birds. They are most successfully bagged with the noose-rod, the well-known kéʃ'ef. In daylight [343] at the place where they congregate, the man builds a small temporary hut, marína, out of a few sticks and twigs with thick foliage, just large enough to cover himself. He continues to sit here until the birds fly up. Cautiously he pushes the long noose-rod through the loose wall of the hut, places the noose over the bird's head, and with a sharp tug pulls in the captured animal. He kills it immediately so that the other birds are not disquieted by its fluttering.

In addition he uses a special decoy which Bridges (MM:XIII, 158;1879) observed: "An Indian builds himself a little bower. Here with a long, slender rod, having a fine noose of whalebone at the end of it, he sits awaiting in patience the landing of the birds. When they are sufficiently near, he cleverly imitates their cry, which awakens their curiosity; they approach his hiding-place nearer, till he is able with noose to catch one of them. He pulls this in to him, and if a male he keeps it alive as a decoy. He thrusts out his noose little by little, and makes his poor

/531 cont./

223 decoy-bird cry out; this brings the birds up again, and so he nooses another" /cited in English/ (255). This requires great

255. Hyades (op. 359 probably also relies on these data given only once here.

dexterity.

/532/ Whenever there is an opportunity, a man will try to attract these ducks with a call. He well knows how sharp-eyed and timid they are. When he approaches them, they quickly dive and escape. Forthwith the man hides behind a rock or under brush. If he has with him a large yellow beak of this duck, he puts it in his mouth and through it makes the call of the female: tē, tē... If the little pair nevertheless remains motionless where they are, he gives the male call: tuk, tuk..., thereby arousing their jealousy. Both animals immediately head in the direction of the caller and, despite their excited struggle, will often look under water for the supposed partner. If the man succeeds in reaching them with his noose-rod, he first captures the female. Thereafter the male hardly moves away, and so he gets it also. If the pair of *ilakuf* are sitting on the open beach, the hunter likewise holds the duck bill in front of his mouth and gives the same call until the two animals jealously fight each other and, unsuspecting, usually draw near to the hunter. He tries to capture them by placing the noose-rod over the head of one after the other and pulling them in.

Finally, the Indian takes advantage of the awkward, brief flight of these heavy ducks who prefer to seek out quiet bays. If several canoes happen to be together, they form a row, block the ducks' escape into the open sea, and slowly push them back to shore. Meanwhile the hunters try to wound or kill the animals with slings or bird spears. On the beach they run after them with a cudgel and knock them down. Since each of the ducks likes to dive and swim short distances under water, the hunter tries to change its course by hurling a few stones with his sling, making them drop into the water just in front of the duck as it swims off. Startled, it turns to one side and thus, by a succession of such stones, is unknowingly steered toward the shore or near the canoe where it falls into the hands of the hunter.

/532 cont./

E. Other Species of Ducks

223 Besides the above species there are others whose meat is welcome to the Indian. The most common are wiyen (Anas crecca), mälöga (Nettion flavirostre), wipetag (Querquedula cyanoptera), läwä (Querquedula versicolor), and wi gubif (Dafila spinicauda).

On the open channel the hunter has a hard time getting near them. Hence he surprises them by creeping up on them when they are on the beach. They usually stand close together. From a short distance the man hurls a few stones simultaneously from his sling into the small flock, aiming at their heads. He is satisfied to stun them, /532/ for this prevents them from flying or running away. The ones that have not been wounded quickly escape into the water and swim off. From the shore the man hurls a few more stones after them, and without much trouble he or his wife afterward collect the wounded animals from their canoe wherever the birds happen to be floating on the water.

F. Special Methods of Capture

In looking for food the Tarauca are inescapably dependent on the conditions of their environment. If they want to obtain through a mass catch a moderate number of certain birds, they stick to the tested methods. Beyond that they capture every bird in a special way and with implements which will guarantee the desired result (536). Dexterity and cunning, a sharp gift of

536. The following statement on the Tarauca in Ozores (p.13) is incorrect: "They seldom succeed in catching birds" /translated from Spanish/. The above descriptions are the best evidence to the contrary.

observation, and a sure command of their own bodies aid them in this.

Whenever there is an opportunity, a man lies in ambush and tries to lure a bird. He is surprisingly good at an exact imitation

/SIHS cont./

223 of the voice of whatever bird species he is after. Since he remains concealed in bush or under a pile of loose sticks or in a low hut as a hiding place, the bird keeps coming closer until it can be reached with the noose-end. The hunter is even more successful when he catches a bird, usually a duck or a goose, and forces it to utter loud calls itself at the desired moment. Hyades (q):359 calls this procedure "hunting in ambush" /translated from French/. The hunter uses his hands to catch young animals and birds brooding on their nests.

He is also very clever at using a torch to blind birds spending the night at certain places and standing close together. He suddenly swings a piece of wood or bark faintly glowing at one end, and before the confused animals can decide to fly away he or his companions has already knocked down a goodly number with cudgels. They bite through the head or neck of the stunned birds in order to kill them quickly. This convenient method is often chosen, especially when a flock of birds is spending the night near the hut.

If the man is bent on getting a single bird whose nest he has discovered, he catches it with the [illegible], the single noose. He uses the narrow strip of whalebone with the running loop, such as is fastened to the top of the long noose-rod (Fig. 60). The man fastens it to a short stick which he drives vertically into the ground. If the nest is well hidden by twigs or branches, he places the open noose in the path which the bird itself has opened. If the nest lies open, however, he blocks it on all sides with twigs and leaves but only a single /12/ approach where he stretches the open noose. In one way or another the bird returning to the nest will unsuspectingly put its head in the noose and pull it shut with its own forward movement. The hunter immediately seizes his booty, the reward for his skill.

It has been occasionally maintained that the Tarumas also shoot birds with bow and arrow (187). I questioned several old

187. Fino-Roy (q):194 wrote. "Birds are also frequently killed with arrows" /cited in English/. Somewhat later Osuna (q):60 maintained. "Birds are hunted with bow and arrow" /translated from Spanish/. Both opinions are not very reliable.

1: Gusinde—986 8-6 (1918-1924) 1937 998 Yaigan 998

/534 cont./

223 men about this. They assured me that an arrow was much too precious to their ancestors to waste it on a bird, and that the other implements proved more effective for catching birds.

Naturally, there is a difference in the frequency with which the various methods are used in various regions. The decisive factor is the special type of bird and the Indian's desire for variety in his monotonous diet. Every man is more or less skillful in all the various manoeuvers and therefore probably always successful. In particular details the Yamana frequently proceed exactly like their neighbors on the Great Island (Vol. I, 182).

A prevailing habit among our Fuegians is that every man exterminates on the spot the birds he has caught. He places the animal on its back, opens its belly with a knife or a sharp mussel shell, and pulls out all the internal organs with a single movement. He almost always finds water close by, which he scoops up with his hand, rinsing out the abdominal cavity of the bird. He pulls a leather strap through the beaks and either ties it around his hips so that the birds encircle his body or he places it over his shoulder so that the birds are evenly distributed front and back. In this way he always has his hands free, for it is possible that other prey will cross his path, which he does not want to escape and which he must pursue without losing a moment of time.

4. Hunting Guanacos, Otters, Foxes

224 Although the Yamana sometimes hunt the guanaco, the otter, and the large fox, they do it not so much for their meat, but chiefly, and in the case of the last two species, exclusively, for their skin. The way they capture these mammals remains to be described.

The guanaco (Lama huanachus) lives only in the eastern part of Yamana territory, on both shores of Beagle Channel, approximately from Puerto Brown or Puerto Harberton eastward and throughout Navarino Island. The hunter attacks the animal on foot, for his dogs are only now and then trained for this and as a rule do not help him much. Hence several men always band together for a hunting expedition. /535/ They take advantage of

/553 cont./

226 462 daily tasks. Hence every other type of fishing, with the exception of the occasional mass-catch of íleščí, is avoided as much as possible (297).

297. According to Hyades (h):20: "...the ease with which they get fish among the large algae relieves them of all the work of making a fishing pen" /translated from French/, and the same is equally true of similar arrangements.

222 5. Birds. Birds' eggs are also counted among the foods from the animal kingdom by our Fuegian natives. Earlier travelers, for example, Fitz-Roy (a):184, often observed that "eggs are eagerly sought for by the natives" /cited in English/. Spring is the time for them. Wherever the family lands, the girls and women hunt [462] for the nests of larger birds. They do not choose among them, nor does it bother them if the eggs have been sat on for some time. Their hunt is, without exception, rewarded by a rich harvest, for they are very familiar with the brooding places of all kinds of birds. Gathering is very easy where penguins brood, for they lay large eggs. The women bring their harvest to the canoe or the hut in their little baskets, and it is promptly consumed. They never risk any special dangers in order to obtain birds' eggs.

223 At the beginning of summer they also take young birds of large species still in the nest. They kill the tender animal by hitting it on the head with a stone or stick or by beating it hard against a rock. Above all, when they search out the breeding places of cormorants and penguins, they quickly fill their baskets with this game. Young cormorants cannot escape beyond the immediate vicinity of their nest because their wings cannot as yet carry them from the height of their nest into the sea, and penguins are likewise nest-bound because they do not yet know how to move in the water.

231 For entertainment and out of playfulness, the women also like to take an occasional young bird to their hut where they feed it until it is full-grown. If it proves tame enough, it is

2: Cooper E-4 (no date) 1946 SH6 Yahgan SH6

262 Lothrop (1928, p. 32) rated the relative importance in the *Yahgan* dietary of their foods as follows: (1) Easily of first importance, mussels; (2) next, seals, and fish of many kinds; (3) next, porpoises, gulls, and bird eggs; (4) then, whales, limpets, crabs, sea urchins, geese, penguins, cormorants; (5) last and least, otter (chiefly in the west), guanaco (only in the east), conchs, ducks, berries (especially wild black currants). The fungi eaten were those growing on trees; those growing on the ground were not eaten. Some wild celery and wild parsnips and two varieties of cress and young shoots of tussock grass were also eaten. Foxes were eaten only in famine as a last [263] resort. Salt was not used.

225 **Hunting.**—Seals were hunted with spear or harpoon from canoes or from land (pl. 36), or killed with clubs. Whales were occasionally hunted in the open sea with spear or harpoon; stranded or dead whales were eagerly exploited. Dogs helped in otter and fox hunting. 223 Cormorants were taken at night by torchlight with clubs; also with a pronged wooden gorge hook. Birds were taken with pole snares (fig. 11, *d*) and with single or multiple tether snares of sinew or whalebone. No lifting pole snares, deadfalls, or pitfalls are reported.

226 **Fishing and sea-food gathering.**—Mussels were gathered by hand; limpets, with a flat-ended stick; sea urchins, with a four-pronged wooden fork; crabs and other Crustacea, with a harpoon or a three-pronged stick. For taking sea food, the *Yahgan* also used a spear with two diverging shanks, or two to four spears lashed together. Women fished with a kelp-stem or braided whale-sinew line, that had a slipknot of whalebone or of quill at the end, instead of a hook, to hold the bait; slowly drawing the fish to the surface, they would grab it by hand. Fishhooks were probably lacking. Weirs of branches or stakes were used. True fish nets were absent. The nearest approach thereto was a small basket attached to the end of a pole and used as a sort of dip net for diminutive fish.

251 **Food storage.**—Limited quantities of dried tree fungi were stored; so too was oil, especially whale and seal oil.

415 **Food preparation and eating.**—Large mussel shells were used for [252] melting fat and holding grease. Water was heated and grease melted by throwing hot stones into them, but there is no record of stone boiling proper.

Shells of large mussels were sometimes used as plates; shells or bark buckets as cups; hollow bird bones or reeds as drinking tubes.

CAMPS AND SHELTERS

361 621 There were no permanent villages. Certain groups of natives related apparently by blood and marriage frequented and occupied more or less fixed separate localities within the respective five sub-

2: Cooper E-4 (no date) 1946 SH6 Yahgan SH6

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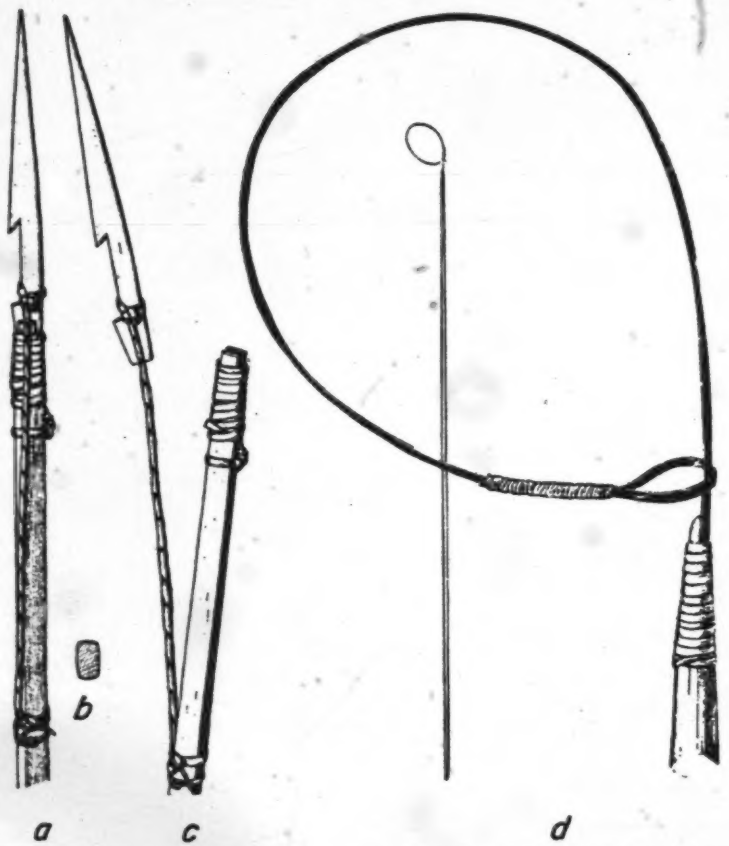

FIGURE 11.—*Yahgan harpoon and pole snare. a*, Harpoon assembled for casting; *b*, cross section of harpoon shaft; *c*, position when dragging through water (length of harpoon head 10 in., or 25.5 cm.); *d*, two views of bird snare (diameter of loop 6½ in., or 16.5 cm.). (After Lothrop, 1928, figs. 82, 87.)

361 621 divisional areas. Apart from initiation and other social or religious functions, which brought larger numbers together temporarily in a common camp, each biological family or small group of two or three families tended to camp apart, more frequently in the same shelter.

342 The two chief forms of family shelter were the beehive hut and the conical hut. The beehive or domed hut, the more common form, especially in the west, was circular or elliptical in ground plan, made of a framework of flexible sticks bent over dome-shape and fastened together, and covered with grass, ferns, branches, bark, skins, or anything at hand (pl. 33, *b*). The conical hut, more fre-

3: Lothrop E-5 (1924-1925) 1928
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it would seem clear that the Ona had acquired knowledge of this weapon from the Yahgan. However, the Ona word for sling (*shínkai*) is not taken from the Yahgan, while slings are mentioned in a supposedly ancient Ona legend. Possibly then the Ona might not have borrowed the sling from their Yahgan neighbors, but in all probability they did,

FIG. 86.—Yahgan sling. Length, 27 in. (14/2351)

BIRD-SNARES

Three different forms of snare were applied to the capture of birds by the Yahgan. In all of these, active prehensile function was performed by a noose of whalebone scraped thin to make it flexible. The simplest procedure was to set such a noose over a bird's nest during its absence. Also a series of nooses might be set on a cord, staked down in an open spot, and covered with suitable bait (fig. 36A). Finally, a whalebone noose was set on the end of a pole (*aúrum*), as illustrated in fig. 87. With this implement it was possible to snare roosting birds during the night.

BIRD-CATCHING BY HAND

In addition to killing birds with arrows, slings, club and torch, and snares, the Yahgan sometimes took birds by a method which, if successful, often resulted in prodigally wasteful and unnecessary slaughter. At night a man would paddle silently to a rock where birds, preferably shags, as they are heavy sleepers, were roosting. He would steal silently ashore, and then seize the nearest bird with one hand around its wings and with the other hand pinch its windpipe so that it could neither flap its wings nor make an outcry. Then he bit off the head, placed the corpse on the ground, and went for the next bird. Thus with luck great numbers might be taken. But the steamboat duck (*Tachyeres cinereus*), a light sleeper, could seldom be captured by this method, and, if any were roosting on the rock selected, they usually gave the alarm. Fitzroy (1839, p. 184) says that the Yahgan dogs were trained to catch birds by stealing upon them as they roosted during the night.

3: Lothrop E-5 (1924-1925) 1928
SH6 Yahgan SH6

On Gable island and other places where birds nested the Yahgan captured the young and tamed them to frequent their wigwams until they were large enough to be eaten. The writer has seen young upland geese and gulls thus tamed. Also, in the summer, the Yahgan had special bird hunts near the breeding places, because at this time of year the birds, though nearly full-grown, have not learned to fly and may be captured by running them down.

FISH-LINE

The Yahgan fish-line, shown in fig. 88, consists of three elements: line (*tápim*), sinker (*társhir*), and bait noose (*tukaléna*). The line is of braided whale-sinew and is ten to twelve feet long. The sinker is a small stone with notches knocked in opposite sides. The noose, like the bird nooses, is a narrow strip of whalebone scraped thin and flexible with a bit of shell. In an emergency a piece of kelp was used as a fish-line.

FIG. 88.—Yahgan fish-line. Length of coiled line, 6 in. (14/2375)

In order to fish, the Yahgan women paddled in their canoes to a shallow reef. There they anchored the canoe by inserting the handle of the paddle under a gunwale so that the blade projected outboard on the other side. A heavy piece of kelp was hauled across this, which not only served to prevent the canoe from drifting but also steadied it. Bait was then inserted in the noose and the line was lowered. When a fish had nibbled at and partly swallowed the bait it was pulled to the surface, seized by a quick dart of the hand, and killed by biting it in the head. Fish were cleaned as soon as they were caught by biting a hole in the belly through which the guts could be extracted with the finger.